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INFLUENCE OF CLIMATE ON FAUNAL EVOLUTION IN THE QUATERNARY

edited by
Jorge AGUSTÍ & Lars WERDELIN

PREFACE

In January, 1991 the European Science Foundation (ESF) created a Network on Quaternary Mammalian Faunas. Among the goals of this network was to organize a series of workshops dealing with important aspects of the evolution of mammalian faunas during the Quaternary. Each of these workshops has included 20-25 invited participants, each of whom was asked to contribute to a given topic. The first workshop was held in Andernach, Germany in October, 1991 (local organizer W. V. KOENIGSWALD) and dealt with the topic **Mammalian migration and dispersal events in the European Quaternary**. It has since been published under this title as *Courier Forschungsinstitut Senckenberg* 153: 1-228 (W. V. KOENIGSWALD & L. WERDELIN, eds). The second workshop, on **Modes and tempos of evolution in the Quaternary** was held in Dijon, France in September 1992 (local organizer J. CHALINE). This has been published in *Quaternary International* 19: 1-116 (J. CHALINE & L. WERDELIN, eds.). The third workshop took place in Sant Feliu de Guixols, Spain in April 1993 (local organizer J. AGUSTÍ) and was on the topic **Influence of climate on faunal evolution during the Quaternary**. The present volume records the proceedings of this third meeting.

The Quaternary is a period characterized by dramatic shifts in the climate. More than in any other period of the Cenozoic, these fluctuations in temperature influenced the composition of mammalian faunas, controlling the series of extinction events that punctuate the period. Therefore it is not surprising that one of the first aims of the ESF Network on Quaternary Mammalian Faunas was to pay particular attention to this topic. The Sant Feliu de Guixols workshop was attended by 22 scientists from 15 countries: J. AGUSTÍ (Sabadell, Spain), P. ANDREWS (London, United Kingdom), A. FORSTEN (Helsinki, Finland), C. S. GAMBLE (Southampton, United Kingdom), R. D. GUTHRIE (Fairbanks, U. S. A.), R. JULIÁ (Barcelona, Spain), W. V. KOENIGSWALD (Bonn, Germany), M. KOHLER (Sabadell, Spain), T. VAN KOLFSCHOTEN (Leiden, The Netherlands), E. KOLSTRUP (Sonderborg, Denmark), L. KORDOS (Budapest, Hungary), K. KOWALSKI (Kraków, Poland), T. LITT (Leipzig, Germany), W. D. MANIA (Halle/Saale, Germany), L. I. REKOVETS (Kiev, Ukraine), B. RZEBIK-KOWALSKA (Kraków, Poland), J.-P. SUC (Montpellier, France), E. TERZEA (Bucarest, Romania), A. TESAKOV (Moscow, Russia), D. TORRE (Florens, Italy), A. TURNER (Liverpool, United Kingdom), L. WERDELIN (Stockholm, Sweden).

A first set of papers was devoted to correlation between climatic evolution and bioevent succession in different geographic areas during the Quaternary. Some were centered at the regional scale, e. g., J.-P. SUC (Mediterranean) and A. TURNER (Africa-Eurasia), while others focused on more restricted areas, e. g., E. TERZEA (Romania), A. TESAKOV and L.

I. REKOVETS (Ukraine). The main aim of these papers was to discuss the degree of congruence between the climatic evolution inferred from palynological or isotopic criteria and the main events observed in the mammalian fossil record.

A second major topic of the workshop was the use of fossil mammals as paleoclimatic indicators. General contributions to this field were presented by P. ANDREWS and T. VAN KOLFSCHOTEN, who discussed the analysis of diversity and the quantitative composition of faunas. A critical analysis of the use of rodents and insectivores was presented by K. KOWALSKI and B. RZEBIK-KOWALSKA, respectively. The main aim of this topic was to analyze the criteria by which mammals are used as ecological or climatic indicators by paleomammalogists.

A third group of contributions focused on the influence of climate on the distribution and eventually extinction of the cold faunas of the last glacial-interglacial cycle (D. GUTHRIE, D. MANIA, E. KOLSTRUP, C. GAMBLE). Special attention was paid to the combined influence of man and climate on the composition of the mammalian faunas of this period.

As members of the network committee and editors of this volume we would like to thank the ESF and especially Jan-Henrik KOCK and Pat COSGROVE for support and help which contributed decisively to the success of the workshop. We thank also Prof. K. KOWALSKI and the staff of **Acta zoologica cracoviensia** for offering to publish this meeting proceedings.

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